

freely given consent (that is not transferable) is unarguably a necessary and primary condition.

The most controversial area surrounds the issue of legalization. The proposition is advanced that if a physician acts benevolently to benefit his patient and if the patient voluntarily consents or requests it (or both), there is no reason why the law should not legalize the physician's killing his patient. There is at present, of course, no such law. Nor are the prospects imminent. Drafting such a law would be difficult because man's motives are suspect: legalized euthanasia could unfortunately be generalized (to get auntie out of the way because she is a burden). In England, a first attempt was made in 1969 in a proposed House of Lords bill. The bill requested 30 days consent before the act. It would allow a patient the means to end his own life and a nurse to act on the direction of a physician. The 30-day consent period was later amended to 60. Voting on the bill was 40 pro and 60 con. Although no legislation is presently underway, there is general agreement that the heart of any law to make euthanasia morally or legally permissible should be fully informed consent (and all variations on this are acknowledged and discussed). To a concerned physician, the dangers of legalization are clear. Laws erode freedom and give power. The prospect of a "physician-technician" approved by statute, functioning as a "deliverer" (the euphemistic term employed here) is one that few of us can view with equanimity.

The book ends with a formal petition and plea for beneficent euthanasia signed by 47 outstanding world scientific and cultural leaders—there are three Californians: Dr. Pauling at Stanford; the Rev. Pett at Glide Memorial Church, San Francisco; and Dr. Leake at the University of California, San Francisco.

Perhaps the reviewer should commit himself: I believe in the social possibility of beneficent euthanasia with the proviso that there be informed consent but moreover that it be generated in the heart of a concerned clinical partnership where physician and patient mutually trust and know one another.

H. HARRISON SADLER, MD

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**THE COURAGE TO FAIL—A Social View of Organ Transplants and Dialysis**—Renée C. Fox, Professor and Chairman, Department of Sociology, University of Pennsylvania, and Professor of Sociology, Departments of Psychiatry and Medicine, University of Pennsylvania School of Medicine; and Judith P. Swazey, Associate Professor, Socio-Medical Sciences Department, Boston University School of Medicine. University of Chicago Press, Chicago, Illinois (06537), 1974. 395 pages, \$12.95.

Here is a book which quietly and persuasively sounds an alarm. It is called *The Courage to Fail*, after the affirmative mode of Tillich's *Courage to Be*. The subject of this book is the prolongation of life through the use of the technologies of renal dialysis, heart and kidney transplantation—often called "half-way" technologies because of their limitations. It explores first hand the problems of scientific uncertainty (immunological), the meaning of life and death, the impact of scarcity and choice, and the interventions by scientific man into a natural human condition—chronic disease. This intervention is possible as a consequence of the momentum of medical science evolving these technologies. Their clinical applications create a bio-medical frontier where the existing social status quo and the institutional norms of law, ethics, morality and economy are challenged. Such a challenge requires an increasing public participation in chartering a new course. It is these therapeutic innovations and this "new biology," or the frontier, which require the particular courage to probe—and often to fail.

The authors are mature and seasoned social scientists and teachers: Renée Fox is the Chairman of the Department of Sociology at the University of Pennsylvania School of Medicine, and Judith Swazey is an Associate Professor of Socio-medical Science at Boston University School of Medicine. They set forth their account in a journalistic rather than a scientific fashion, but this should not deter the thoughtful reader for here in one comprehensive and highly readable book are portrayed all the characters and events of this frontier field set in the framework of technical achievement and social conscience. The contents, for instance, include: a broad panoramic overview of the dialysis and transplant innovations and a conceptualization of the "courage to fail ethos"; an intimate, almost eavesdropping, evaluation and interviews with and of the scientific innovators themselves: Barnard, Cooley, DeBakey in the heart transplant field, and the poignant views of Scribner whose pioneering work with renal dialysis and the invention of the plastic cannula which made it all possible. They present the broad social perspective, "the common conscience" of society, the view, for example, that our organs might be viewed and claimed as a potential social commodity. In the center ring at all times is the ever present paradigm of the renal dialysis, heart and kidney transplant model which exemplifies the attributes and processes of these therapeutic innovations on the frontier, and their impact on society.

To dramatize how these issues impinge upon actual cases, the authors focus on two in particular: that of the artificial heart and that of Ernie Crowfeather. In the first case, that of the artificial heart, a Mr. Karp received a mechanical heart and after his death, Mrs. Karp alleged negligence and claimed the lack of informed consent and the presence of improper experimental controls (the mechanical device had not received sufficient clinical trials in animals). The entire court procedures are included as well as intimate interviews with the "pump team."

The second case is that of Ernie Crowfeather. He was an American Indian by ancestry though not by personal identity, who lost his first kidney following a bicycle accident. The remaining kidney later became infected and he moved inevitably into the health delivery system where for the next thirty months, at the cost of an estimated \$100,000, his life was prolonged. He cared little for himself, never followed the therapeutic regimen and even while rejecting his kidney, was in and out of jail. Finally he died alone in a motel (suicide), even while his doctors rushed there to save him. One physician asked the anguishing question, "What was the meaning of his life?"

Moving beyond these specific cases and considerations, however, the authors focus their attention and concern on the larger issue raised in this work. In particular, they point to the challenge it poses to the physician's privileged status—that of the sole arbiter of health care. This challenge arises out of recognizing the human and social phenomenon of chronic illness, so well illustrated here with the kidney and heart model. More and more the thoughtful physician is recognizing the necessity of replacing the illusion of cure in these cases with the reality of a lifetime management program. He cannot turn away from the unbelievable complications arising from these programs, the terrible limitations on the quality of life, the marginal personal existences and enormous costs. The public, however, has not yet come to this recognition and still approaches the physician with the expectation of a "cure," or at least a greater measure of freedom. On this clinical frontier then, arise the deep

## BOOK REVIEWS

probing questions which demand greater physician sophistication and more public participation. The authors pull no punches in presenting them. On page 324 they list a dozen related questions among which is "should physicians invariably be required to do everything they can to treat dying patients?" With the popular demand for the "right to health care" even these two familiar terms, "health" and "care," require a more thorough examination and increasing colloquy and commitment.

The reader in a hurry will find the two case studies (chapters 7 and 10) rewarding. For one with more leisure, a look through the excellent index and bibliography is highly recommended. If in addition you are approaching a political or academic interest and want more data, read J. Katz' and Capron's *On the Social Factors Affecting the Modern Treatment of Catastrophic Disease* (National Center for Health Service, Dept. HEW, Contract No. HSM 110-69-213). Don't, however, pass it by. These authors have sounded an alarm of importance to all physicians and we would do well to heed it.

H. HARRISON SADLER, MD

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**FITNESS, HEALTH, AND WORK CAPACITY: International Standards for Assessment**—Editor: Leonard A. Larson, PhD, Director of the Department of Physical Education for Men, University of Wisconsin, Madison. Macmillan Publishing Co., Inc., 866 Third Avenue, New York City (10022), 1974. 593 pages, \$14.95.

This volume is written primarily for the physician interested in sports medicine or physical education and various para-medical personnel involved in these fields. It contains statistics and methods of examination in connection with evaluation of physiologic measurement, physique, and performance of individuals particularly directed toward various forms of athletics. This material has been gathered by the International Committee for the Standardization of Physical Fitness Tests, over the past ten years. Its various chapters and sections are written and supervised by members of this international committee. The book is well written and well organized but as a result of multiplicity of authors, there is unavoidable repetition. For example, the explanation of physical examination in this field is repeated at least four times.

The section on anthropologic measurements and body compartmentation is extremely detailed and contains much useful information. Likewise, the section on measurement of physiologic factors and performance factors contains much useful detail which should be of great value not only to those interested in sports medicine but to persons specializing in physical medicine, neurology and orthopedics.

On reading the book, one gains the impression that there is an attempt to "socialize" this branch of medicine in order to select and predetermine skills in various sports depending on body build, power, nationality, race, environment, personal status and motivation. It is obvious to those of us who saw the small and chunky Bill Carr defeat the lanky, more ideal statured Ben Eastman in the 1936 Olympics, that this is a commendable aim but that it will be many years before a laboratory can predict the winner of a race in highly competitive athletic events. Obviously, psychologic factors which enter into these functions are not readily measurable and many of these psychologic factors are unpredictable (i.e., why do various athletes in relatively measurable sports, such as baseball, pitching and batting, have such a variation between their "good" and "bad" days?).

The very interesting equipment for measuring the strength of various muscle groups and the comparative strengths of muscle groups in various sporting events,

makes interesting statistics. However, there is no explanation of the day to day change in the strength of muscle groups in individuals which may be a factor in the performance of their various events on particular days.

The subject covered by this book is an extremely complicated one and difficult to categorize. I believe the committee has done an outstanding job in this direction and has helped in the understanding of physical performance and work capacity in sports. This book should find itself on the shelves of all medical libraries and in the libraries of Physical Education departments and sections of Physical Medicine and Physiology. It is an invaluable reference book.

JAMES H. THOMPSON, MD

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**MICROORGANISMS AND HUMAN DISEASE**—Ernest Alan Meyer, ScD, Professor of Microbiology, Department of Microbiology, University of Oregon Medical School, Lecturer in Microbiology, University of Oregon School of Nursing, Appleton-Century-Crofts, A Publishing Division of Prentice-Hall, Inc., 292 Madison Avenue, New York City (10017), 1974. 451 pages, \$15.00.

*Microorganisms and Human Disease* is intended for "students preparing for medically oriented careers," though the author indicates it may also prove useful to others already in the health sciences. It is apparent that the references provided, many published as recently as 1973 are more appropriate for those who are more sophisticated in microbiology and infectious disease.

The book is divided into five parts: An Introduction to Medical Microbiology, Bacteria and Human Disease, Viruses and Human Disease, Fungi and Human Disease, Parasites and Human Disease. There is considerable unevenness in the treatment given various sections or subsections. For example in the chapter "Antimicrobial Methods" dealing with antiseptics and disinfectants as well as chemotherapeutic agents, the only structural formulae shown are those of sulfanilamide and p-aminobenzoic acid. No structure of the antibiotics is shown which could permit appreciation of certain of their properties, for example, the susceptibility of penicillin G to destruction by beta-lactamase. On the other hand a half page is devoted to a hoary depiction of bacterial colonial morphology. There is virtually no description of physiology or metabolism so important in identification of bacteria. Extensive attention is given to the protozoan, and helminthic agents (127 pages) whereas only 42 pages are devoted to virology. A short section on the common cold fails to name specifically any of the etiological agents, for example, rhinoviruses. Bacteria are dealt with in a helpful format that includes classification and identification, pathogenesis, disease characteristics, diagnosis, and others, but this format is inexplicably applied erratically to other agents.

Some sections are misleading, incorrect or incomplete. For example, one might infer that synthesis of "penicilanic acid" is usually carried out without the essential biological role of a *Penicillium*. Cephalosporins are not mentioned. The section on immunology and host-parasite interaction is extremely brief (9 pages). Anachronistically there is a half page devoted to the Schick test. Mentioned with the Coombs' test is the unexplained "incomplete antibody." Tuberculosis is presented as an infection of lung or intestine. Gonorrhea in the adult female is described only with reference to the large proportion of asymptomatic cases.

The type is large and readable. Review questions and answers represent a useful study device for some students. However, illustrations are not numerous and are generally of poor quality except those in the section on